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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			EXAMINER WOOD, ELLEN S	
			ART UNIT 4174	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/523,130

Applicant(s)

BERNIG ET AL.

Examiner

Ellen S. Wood

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01/21/2005; 08/24/2005</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claims 19-20 are objected to because of the following informalities: Claim 19 is a dependent claim that claims dependency on itself. Claim 20 is objected to because it is dependent upon claim 19. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. The phrase "substantially consisting" is considered indefinite because this not appropriate closed language. Appropriate language could consist of "consisting substantially" or "comprising". Claims 2-19 are rejected because they are dependents of the indefinite claim 1, thus deeming them indefinite.

5. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then

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narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance claims 5, 8, 15, and 19 recite broad limitations followed by a narrower statement.

In the present instance, claim 5 recites the broad recitation of “20-50 mol% ethylene”, and the claim also recites “preferably 42-48 mol% ethylene, particularly preferably 38-48 mol% ethylene”, which is the narrower statement of the range/limitation.

In the present instance, claim 8 recites the broad recitation “at least one outer layer”, and the claim also recites “preferably two outer or surface layers” which is the narrower statement of the range/limitation.

In the present instance, claim 15 recites the broad recitation “monoaxially drawn”, and the claim also recites “preferably biaxially drawn”, which is the narrower statement of the range/limitation.

In the present instance, claim 19 recites the broad recitation “cheese”, and the claim also recites “preferably cheese which is still ripening” which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-3, 5-6, 8, 11-13, 15-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Ramesh et al. (US 5,763,095).

In regards to claim 1, Ramesh et al. disclose a multilayer film having a combination of relatively low oxygen transmission and relatively high carbon dioxide transmission (col. 1 lines 5-8). Ramesh et al. disclose structures containing layers that comprise EVOH and CPA-3 (col. 15 examples 11-13). CPA-3 refers to a nylon 6,6/6,9/6I terpolymer (col. 7 lines 37-40), where the terpolymer comprises hexamethylene amide (col. 4 lines 5-6), which corresponds to applicants "multipolyamide" comprising component I as the 6,6, component II as the 6,9 and/or 6,10, and component III as the 6I. Ramesh et al. disclose that preferred terpolymers include 66/69/61, where 1 refers to isophthalic acid mer, 66/69/6T, 66/610/61, and 66/610/6T (cols. 3-4 line 67 and lines 1-4).

In regards to claim 2, Ramesh et al. disclose a multilayer film comprising of a terpolymer that comprises 10-60% by weight hexamethylene adipamide, 10-60% by weight polyamide mer and 10 to 60% by weight hexamethylene isophthalamide mer (col. 4 lines 4-7). The examiner notes that the instant claims are in mol%, however, the compounds are comparatively the same in both the instant claims and in Ramesh et al.,

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thus the conversion between percent by weight and mol% would be comparatively the same. The ranges of Ramesh et al. are within the majority of the broad range in the instant claim.

In regards to claims 3-4, Ramesh et al. disclose that it is preferred the terpolymer in the multilayer film comprise 20-50% by weight hexamethylene adipamide mer, 20-50% by weight polyamide mer, and 10-40% by weight hexamethylene isophthalamide mer (col. 4 lines 8-11). The ranges of Ramesh et al. are within the majority of the broad range in the instant claim.

In regards to claim 5, Ramesh et al. disclose that that EVOH used in the multilayer film is an ethylene vinyl alcohol copolymer having 44-mole percent ethylene (col. 8 lines 5-6).

In regards to claim 6, Ramesh et al. disclose six layer film that consists of a layer consisting of 90% CPA-3 and 10% EVOH (col. 15 example 11).

In regards to claim 8, Ramesh et al. disclose a film material wherein the said nylon copolymer layer is heat sealable (col. 20 claim 13). Ramesh et al. disclose a film that has a six-layer structure with a heat sealable layer (col. 15 examples 11-13).

In regards to claim 11, Ramesh et al. disclose a film that contains an EVOH and nylon copolymer-containing layer that lowers the oxygen transmission rate of the total film structure (col. 5 lines 10-14). Ramesh et al. disclose a film that contains the oxygen gas barrier layer with at least 2 outer layers (col. 15 examples 11-13).

In regards to claim 12, Ramesh et al. disclose that a tie layer is provided between said nylon copolymer layers and said further polymeric layer. The adhesive layer

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comprises a modified polyolefin capable of adhering to each of said nylon copolymer layer and said further polymeric layer (col. 20 claim 14). The coupling agent layer in the instant claim is preferably a modified polyolefin (pg. 6 lines 13-15). Thus, the adhesive layer is comparatively the same as the coupling agent layer, because of the use of a polyolefin in both Ramesh et al. layer and the instant claim layer.

In regards to claim 13, Ramesh et al. disclose that the tie layers of the film comprise of modified polyamides and modified polyolefins (col. 6 lines 63-65). Ramesh et al. disclose that modified polyamides refer to polymers having anhydride functionality grafted on (col. 3 lines 33-36). A specific example is "modified ethylene vinyl acetate copolymer" (col. 3 lines 29-30). Ramesh et al. disclose the use of LLDPE as a polyolefin (col. 2 lines 43-46).

In regards to claim 15, Ramesh et al. disclose that the film is stretched either in a longitudinal direction, a transverse direction, or both (col. 1 lines 42-55). Thus, the film is monoaxially or biaxially drawn.

In regards to claim 16, Ramesh et al. disclose that the film is partially or completely cross linked (col. 6 lines 4-5).

In regards to claim 17, Ramesh et al. disclose that the film is to incorporate a shrink feature (col. 1 lines 48-49).

In regards to claim 18, Ramesh et al. disclose that the film material is suitable for using in packaging oxygen sensitive products which emit carbon dioxide gas, such as high gassing cheeses (abstract).

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In regards to claims 19 and 21-22, Ramesh et al. disclose that it is common in the packaging of high gassing cheeses to package the cheese product in a film, cure the cheese, and then store the cheese, prior to purchase by the consumer (col. 4 lines 30-35). Thus, the process of curing the cheese after packaging implies that the cheese is still ripening.

In regards to claim 20, Ramesh et al. disclose that the film material is used to package cheese (abstract).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 2-7, 9-10, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. (US 5,763,095).

In regards to claim 2-6, Ramesh et al. disclose a multilayer film comprising of a terpolymer that comprises 10-60% by weight hexamethylene adipamide, 10-60% by weight polyamide mer and 10 to 60% by weight hexamethylene isophthalamide mer (col. 4 lines 4-7). The examiner notes that the instant claims are in mol%, however, the compounds are comparatively the same in both the instant claims and in Ramesh et al., thus the conversion between percent by weight and mol% would be comparatively the same. Ramesh et al. disclose that it is preferred the terpolymer in the multilayer film

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comprise 20-50% by weight hexamethylene adipamide mer, 20-50% by weight polyamide mer, and 10-40% by weight hexamethylene isophthalamide mer (col. 4 lines 8-11). Ramesh et al. disclose that that EVOH used in the multilayer film is an ethylene vinyl alcohol copolymer having 44-mole percent ethylene (col. 8 lines 5-6). Ramesh et al. disclose six layer film that consists of a layer consisting of 90% CPA-3 and 10% EVOH (col. 15 example 11). In the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists (*In re Wertheim* and *In re Woodruff*).

In regards to claim 7, Ramesh et al. disclose that it is advantageous to add at least a minor portion of EVOH to a nylon copolymer-containing layer to lower the oxygen transmission rate of the total film structure at low relative humidity (col. 5 lines 10-14). Ramesh et al. disclose a film layer that consists of 10% EVOH and 90% CPA-3. Ramesh et al. is silent in regarding 20-40% weight percent EVOH and 60-80 weight percent multipolyamide for a film layer. It would be obvious to one of ordinary skill in the art of cheese packaging at the time of the invention to add additional EVOH to the oxygen gas barrier layer to provide the film structure to provide the lowest oxygen transmission rate possible.

In regards to claims 9-10, Ramesh et al. disclose the nylon copolymer of the film material of the present invention may be blended with other polymeric material in order to achieve or optimize one or more desired film properties (col. 5 lines 33-36). Ramesh et al. disclose that specific resins that may be employed include ethylene,

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propylene and butane homopolymers and copolymers, both heterogeneously and homogeneously catalyzed (col. 6 lines 35-38). This is an invitation to use affinity polymers, such as LDPE. Ramesh et al. disclose a layer that consists of EVA-2 and HDPE (col. 13 example 9). It would be obvious to one of ordinary skill in the art at the time of the invention for to provide a layer, which comprises EVA and LDPE to produce a more flexible multilayer film material than that when HDPE is used in the film.

In regards to claim 23, Ramesh et al. disclose a packaging film (col. 1 line 5). The packaging film is used to allow cheese to ripen over time before sold to the consumer. It would be obvious to one of ordinary skill in the art at the time of the invention to form a pouch from the film disclosed in Ramesh et al. to package the cheese, because it is a conventional packaging method.

13. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ramesh et al. (US 5,763,095) in view of Vadhar (US 6,333,061).

Ramesh et al. disclose the packaging film as discussed in the previous sections. Ramesh et al. is silent in regarding a colored coupling agent layer. Vadhar discloses a multilayer film suitable for packaging that contains a tie layer with a polymeric adhesive, an anhydride grafted polyolefins blend, a coloring agent, LDPE and EVA (table 9). It would be obvious to one of ordinary skill in the art at the time of the invention to use a the coloring agent tie layer in Vadhar with the multilayer film of Ramesh et al., because this would provide a colored package that could be used for marketing strategies.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen S. Wood whose telephone number is 571-272-3450. The examiner can normally be reached on Monday-Thursday 7:30am-5:00pm EST Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



D. LAWRENCE T. TARAZANO
PRIMARY EXAMINER

Ellen S Wood
Examiner
Art Unit 4174